



Space Launch System

Highlights

December 2013



NASA and ATK Complete Avionics and Controls Testing for SLS Boosters



NASA and ATK have successfully completed two key avionics tests for the solid rocket boosters for SLS. The avionics tests, called hot fires, operate the booster's thrust vector control (TVC) system as if the booster were actually launching the SLS on a mission. The tests were conducted at ATK's facility in Promontory, Utah, and represent a significant milestone as well as validation of SLS cost-saving efforts. (NASA)

I am
building
SLS

Amir Abraham

Electromagnetic Environment
Effects Project Lead Engineer



To find out more about the people
who are building SLS, [click here](#).

Spaceflight Partners: L-3 Cincinnati Electronics

EDITOR'S NOTE: Every month, SLS Highlights turns the spotlight on one of the industry partners helping to create the largest rocket ever built for human space exploration. In this issue, we profile L-3 Cincinnati Electronics in Mason, Ohio.

On Oct. 29, L-3 Cincinnati Electronics (L-3 CE) celebrated completing preparations for delivery of the new SLS booster avionics to ATK, prime contractor for the SLS boosters.

Culminating from five years of development, L-3 CE delivered eight avionics control units to support system integration testing at ATK. Successful completion of this testing is a prerequisite to flight. The avionics provided by L-3 CE will fly on ATK's twin Solid Rocket Boosters for the SLS exploration test missions, EM-1 and EM-2, including the first with crew on EM-2.

Russ Walker, president of L-3 CE, said, "The SLS avionics team has worked very hard supporting this key delivery. All of us working the program understand the importance of meeting key SLS milestones and offering an affordable solution. The L-3 CE, ATK and NASA teams are delivering on those objectives."

L-3 CE is scheduled to complete booster avionics Critical Design Review in the first quarter of 2014. L-3 CE is a critical avionics supplier to both the SLS booster and core stage elements.



Participating in the Oct. 29 celebration at L-3 Cincinnati Electronics are, from front left, Paul Karner, ATK's senior program manager, SLS Booster Avionics and Control Systems; David Wood, NASA chief engineer for SLS Boosters; and Bruce Tiller, NASA deputy manager for SLS Boosters. (L-3)



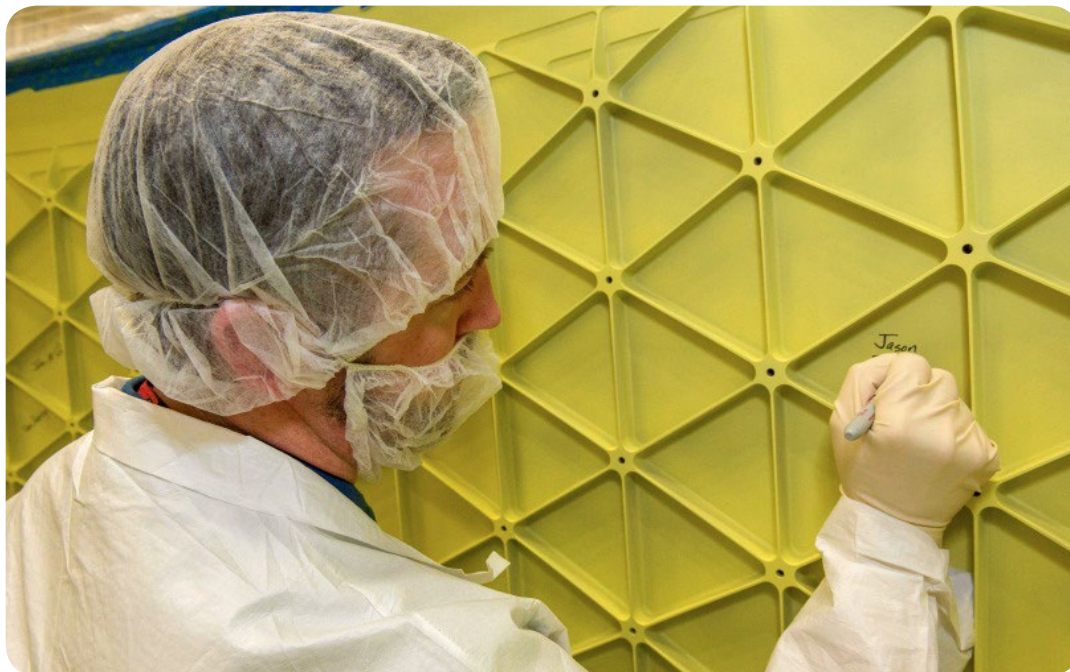
Bruce Tiller, NASA deputy manager for SLS Boosters, speaks to L-3 employees and ATK leaders during a celebration for completing preparations for delivery of the new SLS booster avionics to ATK. (L-3)

SLS Chief Engineer Driven by 'Challenge' of Building America's Next Great Rocket



During the Saturn V days, a 10-year-old boy came to NASA's Marshall Space Flight Center with his dad and uncle for an open house. There to shake that young boy's hand was Wernher von Braun, the first center director of Marshall who would later be hailed as one of the all-time champions of space exploration. That day, as S1 stage engines ignited every hour in the test stand, something ignited in that little boy, as well—a dream to one day work "at one of the coolest places" he'd ever been. Today, he's living that dream. That boy was Garry Lyles, now responsible for the overall system design of the most powerful rocket in history—NASA's SLS. To read Lyles' full story, [click here](#). (NASA/MSFC)

Signatures to Space in 2014



Jason Eldridge, an ERC Inc. employee supporting the Materials & Processes Laboratory at NASA's Marshall Space Flight Center, signs his name on the interior of the adapter that will connect the Orion spacecraft to a United Launch Alliance Delta IV rocket for EFT-1. Marshall Center team members who were involved in the design, construction and testing of the adapter had the opportunity to autograph it before the hardware is shipped to NASA's Kennedy Space Center in February. Eldridge was on a team that performed ultrasonic inspections on the adapter's welds—ensuring they are structurally sound. (NASA/MSFC)

First Welded Dome Completed at Michoud Assembly Facility

The first SLS core stage forward liquid oxygen (LO2) tank dome recently was completed on the Circumferential Dome Weld Tool at NASA's Michoud Assembly Facility in New Orleans. The dome was welded as a “confidence” article to ensure that the weld tool can produce the qualification and flight domes. The SLS core stage liquid hydrogen and liquid oxygen tanks will each have two domes similar to the confidence article.

The dome will be used to develop inspection techniques for the flight articles. It also will be used for future confidence welding on the Vertical Assembly Center—one of the world's largest welding tools, scheduled to be completed in 2014. The foundation recently was poured for the tool, and is currently being cured. It required 90 truckloads of material to pour the 900 cubic yards of concrete for the groundwork. To see a video of the pour, [click here](#).



NASA/Michoud

SLS On the Road...



SLS Program Manager Todd May talks about America's "Next Great Ship" on Dec. 5 at the Huntsville Alabama L5 Society meeting. (NASA/MSFC)



Kirk Pierce, a Media Fusion employee supporting the SLS Program Office, shares information about the rocket with Elijah Williams, MSFC Legislative Affairs Liaison, Dec. 4 at an exhibit outside the Marshall Center's Morris Auditorium. (NASA/MSFC)



A 30-foot inflatable of the SLS rocket was on display at the Iron Bowl, held Nov. 30 at Auburn University. (NASA/MSFC)

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